



## Missouri Bladderpod Status at Wilson's Creek National Battlefield

### Importance: *A threatened species*

The Missouri bladderpod (*Lesquerella filiformis*), listed as a threatened plant under the Endangered Species Act of 1973, grows in Southwestern Missouri and Northwestern Arkansas, and occurs at Wilson's Creek NB. Wilson's Creek staff continues to adapt landscape management practices to meet needs of cultural and natural resources, while protecting the Missouri bladderpod populations.

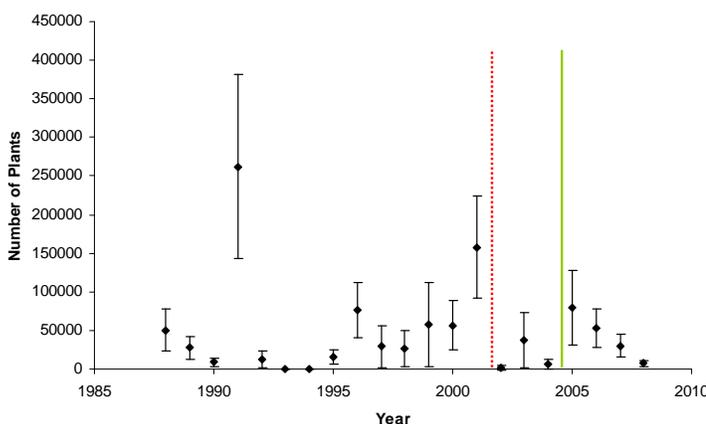


### Long Term Monitoring: *Habitat assessment and population monitoring*<sup>1</sup>

The Heartland Network Inventory and Monitoring Program has used various methods to estimate the number and density of bladderpods at Wilson's Creek NB. These methods included counting plants and/or estimating density within study plots. The network established recent fire and forest management history to compare with population trends.

### Status and Trends: *Population size variable over 21 years of monitoring*

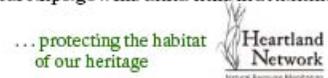
Scientists have documented the persistence of bladderpod at several locations for 21 years and at one more site for eight years. A relatively large amount of variability in population size occurred at each site during that time period. The relationship between bladderpod population size and prescribed fire use has been variable with some populations increasing and others decreasing following fire. Additionally, scientists made several other observations:



1. Removal of Eastern red cedar (*Juniperus virginiana*) in 2004 resulted in an increase in bladderpod population size.
2. The response of Missouri bladderpod populations to fire depends on factors other than the simple presence or absence of fire and may include weather, fire intensity and timing of fire.
3. Extirpation of bladderpod at one site outside of Wilson's Creek management jurisdiction could occur, based on a precipitous decline in the population size during recent years.

Missouri bladderpod population size at one site shows variability over time. Error bars represent 95% confidence intervals (1988-2005) and population size intervals (2006-2007). Red dashed lines represent prescribed fire events. Green solid lines represent Eastern red cedar clearing events.

Heartland Network Inventory and Monitoring Program of the National Park Service. Visit [www1.nature.nps.gov/im/units/htln/index.htm](http://www1.nature.nps.gov/im/units/htln/index.htm).



<sup>1</sup> Young, C.C. 2008. Missouri Bladderpod Status Report for Wilson's Creek National Battlefield: 2008. Heartland Network Monitoring Report Update—July, 2008.